

ABSTRACT OF THE DISCLOSURE

The purified nerve growth factor consisting of 116 amino acids from the venom of Naja kaouthia snake was fragmented by trypsin digestion. The fragments were isolated individually by high pressure liquid chromatography (HPLC). Thus separated fragments were tested for the biological activity of neurite growth on rat adrenal pheochromocytoma (PC12) cells. The fragment which showed the most activity was named ADESH. Subsequently, ADESH was sequenced. Synthetic ADESH was constructed using ten amino acids N L G E H P V C D S (SEQ. ID. NO: 3) of the fragment from its N-terminal is designated as AD-10. Different versions of synthetic ADESH such as AD-15 and AD-5 consisting of 15 and 5 amino acids respectively were constructed; having the sequence: N L G E H P V C D S T D T W V (SEQ. ID. NO: 2) for AD-15 and N L G E H (SEQ. ID. NO: 4) for AD-5. The synthetic AD-15 and AD-5 mimic the biological activity of the natural NGF.